TWO SEASON'S COLLECTING OF APHIDÆ, PRINCIPALLY ON LONG ISLAND, NEW YORK, WITH NOTES ON SOME OF THE SPECIES.

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The Alphidæ listed below were all collected by the writer and represent two seasons' attention to this group. The material was gathered with the intention of building up a study collection but, after making an earnest effort it was abandoned, through lack of time to prepare material, for other groups in the Homoptera requiring less time to prepare. One that has tried to work on this family can well appreciate what others have accomplished. These few words may be considered a modest apology for printing a mere list with so few comments.

The writer is much indebted to Miss Edith M. Patch of the Maine Agricultural Experiment Station, Orono, Maine, and to Mr. John June Davis, then at the United States Entomological Laboratory, West La Fayette, Indiana, and wishes here to express his appreciation for their willing and unfailing assistance in determining the material, as well as to Mr. Norman Taylor of the Brooklyn Botanical Garden for his kind determination of the food plants. Credit must be given to Miss Dorothy Olsen for the tedious work of copying the labels and compiling the list.

With few exceptions, the slides have all been deposited with the American Museum of Natural History. The comments on the food habits are based largely on the recent work by Wilson and Viccory, Trans. Wis. Acad. Sci. Arts and Letters, Vol. XIX, Pt. I, pp. 22-355, 1918. The asterisk (*) indicates new specifically determined food plants.

Macrosiphum taraxaci Kaltenbach.

Maspeth, N. Y., VI, 27, 1914, on Taraxacum officinale.

There seems to be very little in American literature concerning this dandelion aphid. I have seen no record of its being taken in New York State.

Macrosiphum pisi Kaltenbach.

Wading River, N. Y., V, 30, 1913, on Medicago lupulina,*

The pea aphid, a destructive and cosmopolitan species, with a long list of food plants to which the above mentioned plant is an addition.

Macrosiphum anothera Williams.

Honesdale, Pa., IX, 23, 1913, on Enothera biennis.

Macrosiphum illinoisensis Shimer.

Maspeth, N. Y., VI, 25, 1913, and VII, 13, 1914, on grape vine.

Macrosiphum rudbeckiæ Fitch.

Maspeth, N. Y., VI, 28, 1914, on Silene noctiflora;* X, 16, 1914, on cultivated aster; VII, 12, 1913, on Solidago sp.; IX, 1, 1913, on Lactuca sp.; IX, 1, 1913, on Xanthium canadensis; IX, 4, 1914, on Rudbeckia laciniata; IX, 7, 1913. on cultivated lettuce.

Wading River, N. Y., V, 30, 1913, on Antennaria neodioica.* Honesdale, Pa., IX, 26, 1913, on Artemisia sp., and on Anaphalis margaritacea.*

Rockaway Beach, N. Y., VII, 26, 1914, on Solidago sp.

Although it has a long and varied list of food plants, these records seem to increase the list by at least four species

Macrosiphum sanborni Gillette.

Maspeth, N. Y., VII, 13, 1914, and VII, 18, 1914, on chrysanthemum.

Macrosiphum rosæ Linnaeus.

Maspeth, N. Y., VII, 18, 1914, on rambler rose.

Macrosiphum sp.

Wading River, N. Y., V, 30, 1913, on high-water scrub, *Iva* frutescens.

Macrosiphum sp.

Maspeth, N. Y., V, 28, 1914, on Silene noctiflora.

Drepanaphis acerifoliæ Thomas.

Maspeth, N. Y., X, 26, 1914, and VI, 25, 1913, on maple (Acer saccharinum).

Phorodon galeopsidia Passerini.

Maspeth, N. Y., VI, 24, 1913, VIII, 24, 1913, and VIII, 2, 1914, on *Polygonum* sp.

Phorodon inulæ Passerini.

Honesdale, Pa., IX, 26, 1913, on Inula helenium L.*

This adds one more species of Inula to its list of food plants.

Siphocoryne pastinacæ Linnæus (= S. xylostei Schrank).

Maspeth, N. Y., XI, 1, 1914, on Lonicera japonica.

Siphocoryne angelicæ Del Guercio.

Maspeth, N. Y., VIII, 23, 1913, on Artemisia absinthium.

I found this species on a single worm-wood plant in my garden in such great numbers as to do considerable damage both by feeding and by secretion of honey dew, almost destroying the plant before it drew my attention.

Siphocoryne capreæ Fabricius.

Maspeth, N. Y., VII, 18, 1914, on cultivated parsnips. Cerosipha rubifolii Thomas.

Maspeth, N. Y., VI, 28, 1914, on Rubus sp.

Myzus cerasi Fabricius.

Wading River, N. Y., V, 30, 1913, on cherry seedlings.

Myzus persicæ Sulzer.

Maspeth, N. Y., X, 26, 1914, and XI, 1, 1914, on *Prunus serotina*; XI, 7, 1913, on cultivated radish; X, 15, 1914, on kohlrabi.

Winfield, N. Y., XI, 14, 1914, on Chenopodium sp.

It may be interesting to know that Wilson and Vicory, in their recent list, have compiled one hundred and seventy-four species of food plants for this Aphid.

Myzus fragæfolii Cockerell.

Maspeth, N. Y., VI, 13, 1914, on Fragaria virginiana.*

There has been no definitely determined food plant previously given for this species.

Hyalopterus arundinis Fabricius.

Maspeth, N. Y., XI, 1, 1914, on Prunus serotina.*

It has been cited as feeding on five other species of *Prunus* besides species of genera more or less remote from this.

Aphis rumicis Linnæus.

Maspeth, N. Y., VI, 13, 1914. on Arctium lappa; X, 29, 1914, on Chenopodium sp.

Aphis forbesi Weed.

Maspeth, N. Y., VI, 13, 1914, on Fragaria virginiana.*

This was found abundantly scattered in a strawberry patch in common with Myzus fragæfolii Cockerell. The above record establishes a specifically determined food plant for this species as well. Both species had previously only been cited on Fragaria sp. Aphis gossypii Glover.

Maspeth, N. Y., X, 26, 1914, on Hisbiscus syriacus.*

Reported as taken on a long list of food plants including *Hibiscus* species, but no mention is made of *H. syriacus*.

Aphis viburnicola Gillette.

Maspeth, N. Y., VI, 21, 1914, on Viburnum sp.

Aphis urticæ Fabricius.

Honesdale, Pa., IX, 26, 1913, on Urtica gracilis.*

This makes a third species of food plant in the genus Urtica.

Aphis bakeri Cowen.

Honesdale, Pa., IX, 23, 1913, on apple.

Aphis coreopidis Thomas.

Maspeth, N. Y., VIII, 2, 1914, on Bidens frondosa.

Honesdale, Pa., IX, 28, 1913, on Bidens sp.

Aphis atriplicis Linnæus.

Maspeth, N. Y., VII, 17, 1913, and VIII, 2, 1914, on Cheno-podium album.

Aphis cephalanthi Thomas.

Wading River, N. Y., V, 30, 1913, on Cephalanthus occidentalis.

Aphis pomi De Geer.

Wading River, N. Y., V, 30, 1913, on apple seedling.

Aphis lutescens Monell.

Winfield, N. Y., VI, 8, 1913, in Asclepias cornuta.*

Three other species of Asclepias are mentioned as food plants for this aphid.

Aphis maidis Fitch.

Maspeth, N. Y., VIII, 24, 1913, on Syntherisma sanguinea; VIII, 24, 1913, on Chwochloa glauca; VIII, 24, 1913, on Echinochloa crus-galli.

Aphis helianthi Monell.

Blissville, N. Y., X, 17, 1914, and IX, 6, 1913, on Helianthus rigidus.*

A general feeder on the sunflower, this makes the eighth species of *Helianthi* that it is known to attack.

Aphis brassicæ Linnæus.

Maspeth, N. Y., IX, 17, 1913, on cultivated radish.

Aphis sanborni Patch.

Maspeth, N. Y., V, 20, 1914, on Sambucus canadensis.*

This species has heretofore only been known to occur on *Ribes* sp. This new food plant record has been questioned. It would be of interest to have it corroborated.

Aphis setariæ Thomas.

Maspeth, N. Y., IX, 19, 1914, on Digitaria sanguinalis.

Chaitophorus sp.

Honesdale, Pa., X, 3, 1913, on Salix sericea.

Chaitophorus populicola Thomas.

Maspeth, N. Y., IX, 7, 1913, on Populus sp.

Myzocallis discolor Monell.

Maspeth, N. Y., X, 26, 1914, on Quercus prinus.*

This is known to occur on two other species of oak.

Calaphis betulæcolens Fitch.

Honesdale, Pa., X, 3, 1913, IX, 23, 1913, IX, 28, 1913, and IX, 10, 1915, on *Betula lutea*.*

This makes a third species of *Betula* recorded as its food plant. *Euceraphis betulæ* Koch.

Honesdale, Pa., X, 3, 1913; IX, 23, 1913; IX, 28, 1913; IX, 27, 1915; White Plains, N. Y., IX, 27, 1914; all on *Betula lutea*.*

This records another species of *Betula* to its list of food plants, as well as an interesting record of distribution for this European introduction. Elsewhere in the United States there have been few other localities mentioned.

Myzocallis bella Walsh.

White plains, N. Y., IX, 27, 1914, and Kissena Lake, Flushing, N. Y., X, 4, 1914, on *Quercus rubra*.

Lachnus strobi Fitch.

Wading River .N Y., V, 30, 1913, on pine.

Eriosoma americana Riley.

Winfield, N. Y., VI, 8, 1913, and Maspeth, N. Y., VI, 14, 1914, on elm.

Eriosoma lanuginosa Hartig.

Winfield, N. Y., VI, 27, 1914, and VI, 15, 1914; Maspeth, N. Y., VII, 19, 1914, on elm.

Eriosoma lanigera Hausman.

Honesdale Pa., IX, 23, 1913, on apple; IX, 23, 1913, on Cratægus sp.; Maspeth, N. Y., VII, 19, 1914, on apple.

Tetraneura ulmisacculi Patch.

Maspeth, N. Y., VI, 28, 1914, on elm.

Tetraneura graminis Monell.

Winfield, N. Y., VI, 8, 1913; Maspeth, N. Y., VI, 25, 1913, and VI, 14, 1914; on elm.

Hormaphis hamamelidis Fitch.

Wading River N. Y., V, 30, 1913 and 1914, on Hamamelis virginiana.

Pemphigus rhois Fitch.

Honesdale, Pa., X, 3, 1913, on Rhus sp. (sumach).

Forda occidentalis Hart.

Maspeth, N. Y., VI, 21, 1913, on Polygonum roots.

Rhopalosiphum hippophaes Kaltenbach.

Maspeth, N. Y., IX, 19, 1914, on Polygonum pennsylvanicum.*

A third species of *Polygonum* to be cited as food plant. *Pterocomma smithiæ* Monell.

Wading River, N. Y., V, 30, 1914, on Salix fragilis.* Winfield, N. Y., X, 12, 1914, on willow.

This is a third Salix sp. added to the list.